REMARKS

Careful review and examination of the subject application are noted and appreciated.

SUPPORT FOR THE CLAIM AMENDMENTS

Support for the claim amendments may be found in the specification, for example, on page 7 lines 11-13 and FIG. 1, as originally filed. Thus, no new matter has been added and no new issues are believed to be raised. Since the amendments should only require a cursory review, entry of the amendments is respectfully requested per MPEP §714.13.

CLAIM REJECTIONS UNDER 35 U.S.C. §102

The rejection of claims 21, 23 and 24 under 35 U.S.C. §102(b) as being anticipated by Kato et al, '164 (hereafter Kato) has been obviated in part by appropriate amendment, is respectfully traversed in part, and should be withdrawn.

Kato concerns macroblock coding including difference between motion vectors (Title).

The Federal Circuit has stated that "[t]o anticipate, *every element and limitation* of the claimed invention must be found in a single prior art reference, *arranged as in the claim.*"[1]

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[1] *Brown v. 3M*, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) citing *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001); *Scripps Clinic & Research*

(Emphasis added). The Federal circuit has added that the anticipation determination is viewed from one of ordinary skill in the art: "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention."[2] Furthermore, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."[3]

Claim 21 provides a step for generating a representation for a motion for two blocks. Despite the assertion in the Office Action, column 20 lines 40-67 of Kato appear to be silent regarding a representation for a motion for two blocks:

> Moreover, forward motion vectors and backward motion vectors are caused to respectively have one-to-one correspondence relationship with respect to register memories PMV1~PMV4 in accordance with order of transmission within macroblock. In more practical sense, forward motion vector transmitted first within macroblock is stored into register memory PMV1. Forward motion vector transmitted secondly within macroblock is stored into register memory PMV2. Further, backward motion vector transmitted first within macroblock is stored into register memory PMV3. Backward motion vector transmitted secondly within macroblock is stored into register memory PMV4. As stated above, in this embodiment, the order of transmission within macroblock of respective motion vectors provides indices indicating the

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Found. v. Genentech Inc., 927 F.2d 1565, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991) (Emphasis added by Appellant).

[2] *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991).

[3] *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, USPQ2d 1051, 1053 (Fed Circ. 1987).

> relationship between respective motion vectors and registers within register memories PMV1~PMV4 into which those motion vectors are stored.
>
> In other words, in this embodiment, indices of "1"~"2" are provided in order of transmission of forward motion vectors within macroblock, and indices of "3"~"4" are provided in order of transmission of backward motion vectors therewithin, thus allowing motion vectors having respective indices and the register memories PMV1~PMV4 to have one-to-one correspondence relationship. It is to be noted that respective input terminals a~d of register memories PMV1~PMV4 of FIG. B are connected to corresponding selected terminals of switch 80 to FIG. 2, and output terminals e~h are connected to corresponding selected terminals of switch 82 of FIG. 2.

Nowhere in the above cited text, or in any other section does Kato appear to discuss a representation for **two blocks**. Furthermore, the Office Action does not specify which element of Kato is allegedly similar to the claimed representation for motion. In contrast, the above text of Kato appears to discuss the relationships between four motion vectors of **a single macroblock** with the register memories PMV1 thru PMV4. Therefore, Kato does not appear to disclose or suggest a step for generating a representation for a motion for two blocks, as presently claimed. As such, the Office is respectfully requested to either (i) clearly identify the element of Kato allegedly similar to the claimed representation for motion or (ii) withdraw the rejection.

Claim 21 further provides that the representation has less than a maximum number of bits capable of representing each possible combination of four motion vectors for the two blocks. Despite the assertion in the Office Action, the text in column 23,

line 51 thru column 24, line 23 of Kato does not appear to discuss (i) how many bits some unidentified representation for motion of two blocks has and (ii) how may bits each possible combination of four motion vectors for the two block have:

> This register output motion vector signal S82 is scale-converted by scale indication signal S85 (scale indication signal A) outputted from switching circuit 85 on the basis of prediction type signal S40 from terminal 75 at scale converter 84 of scale conversion A as occasion demands, and is then inputted to difference circuit 88. At this circuit, a difference value between the scale converted motion vector and currently inputted motion vector signal S8 is calculated. Thus, difference motion vector signal S50 is obtained. This signal is outputted from terminal 76.
>
> On the other hand, the currently inputted motion vector signal S8 is scale-converted (scale converted motion vector signal S80) by scale indication signal S83 (scale indication signal B) outputted from the switching circuit 85 at scale converter 83 of scale conversion B as occasion demands, and is then overwritten and is newly stored into register designated by the register index designation signal S88 through switch 80. It is to be noted that scale converter 84 and scale converter 83 as mentioned above may be used for spatial scale adjustment at the time of calculating difference motion vector between motion vector making reference to frame and motion vector making reference to field, and/or scale adjustment based on the cause in point of the time base at the time of calculating difference vector between motion vectors in which differences in point of time up to reference field are different.
>
> Reset of register memory PMV of the vector difference determination element 27 is carried out at macroblock in which motion compensation mode signal S9 caused to be through terminal 77 is intra-coded mode and macroblock in which slice start flag S301 from terminal 77 is set. At this time, all registers of register group 81 are reset to zero. Instruction of reset of this register is carried out by register reset instruction element 78.
>
> In this embodiment, difference determination element 27 for motion vector is constructed as above. It is to be noted that while, in the above-described embodiment, the order of output of motion vectors S8 of motion compensating circuit 18 is the same as the order of transmission of motion vectors determined in advance, the former may be different from the

> latter. However, also in this case, since input order of difference motion vectors S50 to VLC element 20 is required to be finally the same as the transmission order, it is necessary to extra or additional configuration for delivering predicted field parity signal to register index designation signal generator 89 to transpose or interchange output order of difference motion vectors S50, or the like.

Nowhere in the above text, or in any other section does Kato appear to discuss (i) a number of bits for a representation for motion of two blocks and (ii) a number of bits for four motion vectors of the two blocks. Therefore, Kato does not appear to disclose or suggest that the representation has less than a maximum number of bits capable of representing each possible combination of four motion vectors for the two blocks as presently claimed.

Claim 21 further provides a step for exchanging the representation with a memory. Despite the assertion in the Office Action, the text of Kato in column 23, lines 40-50 appears to be silent regarding exchanging a representation for motion of two blocks with a memory:

> value 4, register memory PMV4 is designated in register group 81.
>
> As another example, in the case where there is one "motion_vector_count" and motion compensation mode signal S9 is the backward predictive mode, since there is one backward vector as the number of all motion vectors to be transmitted within macroblock, register memory PMV3 is designated in register group 81 when motion vector count number signal S87 takes the value 1.
>
> In response to the register index designation signal S88, the register group 81 outputs motion vector signal S82 stored in the designated register through switch 82.

Nowhere in the above text, or in any other section does Kato appear to discuss exchanging some unidentified representation for motion

of two blocks with the register group 81 (apparently alleged similar to the claimed memory). Therefore, Kato does not appear to disclose or suggest a step for exchanging the representation with a memory as presently claimed.

Claim 21 further provides that the two blocks use a macroblock adaptive field/frame coding. In contrast, Kato appears to be silent regarding macroblock adaptive field/frame coding as presently claimed. As such, claim 21 is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 23 provides that the representation is configured to accommodate (i) a first number of possible vectors for a first of the motion vectors for a first block of the two blocks, (ii) a second number of possible vectors for a second of the motion vectors for the first block, (iii) a third number of possible vectors for a third of the motion vectors for a second block of the two blocks and (iv) a fourth number of possible vectors for a fourth of the motion vectors for the second block. Despite the assertion in the Office Action, the text of Kato in column 19, lines 40-67, column 20 lines 40-60 and column 23, lines 25-35 appears to be silent regarding (i) the representation, (ii) the four motion vectors of the two blocks and (iii) the four numbers of possible vectors as presently claimed. As such, the Office is respectfully requested to either (i) clearly identify one-to-one

the elements of Kato allegedly similar to the claimed elements or (ii) withdraw the rejection.

Claim 24 provides a base 2 logarithm of a product of four numbers. Despite the assertion in the Office Action, the text of Kato in column 20, lines 1-35 appears to be silent regarding a base 2 logarithm of a product of four numbers as presently claimed. As such the Office is respectfully requested to either (i) clearly identify the four numbers and the product of those four numbers in Kato allegedly similar to the claimed numbers and claimed product or (ii) withdraw the rejection.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claims 1-20, 22 and 25 under 35 U.S.C. §103(a) as being unpatentable over Kato '164 has been obviated in part by appropriate amendment, is respectfully traversed in part, and should be withdrawn.

Kato concerns macroblock coding including difference between motion vectors (Title).

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.[4] If the Examiner does not produce a *prima facie* case, the Applicant is

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[4] Manual of Patent Examining Procedure (M.P.E.P.), Eighth Edition, Rev. 3, August 2005, §2142.

under no obligation to submit evidence of non-obviousness.[5] ***The Examiner must show*** that (a) there is some ***suggestion or motivation***, either in the references or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references, (b) there is ***a reasonable expectation of success***, and (c) the prior art reference (or combination of references) teaches or suggests ***all of the claim limitations***.[6] Furthermore, the Board has held that the claimed invention is obvious only if either the references expressly or implicitly suggest the claimed invention, or a convincing line of reasoning is presented by the examiner as to why an artisan would have found the claimed invention to be obvious in light of the teachings of the cited references.[7] (Emphasis added)

Claim 1 provides a step for exchanging a particular value of a plurality of values with a memory, each of the values defining which of two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types, wherein the exchanging includes at least one of reading from the memory and writing to the memory. The Office Action asserts that (i) a register group 81 (PMV1, PMV2, PMV3 and PMV4) of Kato is similar to

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[5] M.P.E.P. §2142.

[6] M.P.E.P. §2142.

[7] See *Ex Parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985) (emphasis added by Appellant).

the claimed memory and (ii) a register index designation signal of Kato conveys a value similar to the claimed particular value. However, Kato appears to be silent regarding reading/writing of the register index designation signal to/from the register group 81. Kato also appears to be silent regarding the register index designation signal (alleged similar to the claimed values) defining which of **two blocks** use which of the motion vectors. Furthermore, the text in column 29, lines 50-67 and column 30, lines 1-32 of Kato does not appear to teach or suggest storing the register index designation signal in the register group 81 as alleged in the Office Action. Therefore, Kato does not appear to teach or suggest a step for exchanging a particular value of a plurality of values with a memory, each of the values defining which of two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types, wherein the exchanging includes at least one of reading from the memory and writing to the memory as presently claimed. As such, the Office is respectfully requested to either (i) provide evidence and an explanation of how such evidence would motivate one of ordinary skill in the art to store the register index designation signal with the motion vectors in the register group 81 of Kato or (ii) withdraw the rejection.

Claim 1 further provides that each of the values define which of the two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types. In contrast,

Kato appears to be silent regarding the register index designation signal (asserted to carry the claimed values) being associated with two macroblocks (asserted similar to the claimed two blocks). Furthermore, the explanation on page 3 of the Office Action fails to address the register index designation signal of Kato being associated with two macroblocks. Therefore, Kato does not appear to teach or suggest that each of the values define which of the two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types as presently claimed.

Claim 1 further provides that the prediction types include (i) a first prediction type for a first reference picture list and (ii) a second prediction type for a second reference picture list. In contrast, Kato appears to be silent regarding two prediction types for two reference picture lists. Furthermore, the assertion on page 3 of the Office Action that Kato discloses "a plurality of prediction types, which each type having its own referent picture list" does not appear to be supported by column 2, lines 1-31, column 6 lines 35-55 and column 20 lines 1-40 of Kato. In particular, Kato does not even use the phrase "reference picture list". Therefore, Kato does not appear to teach or suggest that the prediction types include (i) a first prediction type for a first reference picture list and (ii) a second prediction type for a second reference picture list as presently claimed. As such, the Office is respectfully requested to either (i) provide evidence in

support of the allegations of reference picture lists in Kato or (ii) withdraw the rejection.

Claim 1 further provides a step for representing motion for the two blocks with a group comprising the particular value and up to all of said motion vectors. The Office Action alleges that grouping the register index designation signal (alleged to carry the claimed particular value) with a selected motion vector would have been obvious. However, the proposed motivation to modify Kato to include a grouping appears to be improperly based on the claims. The proposed motivation, for efficient reconstruction, is too general because it could cover almost any alteration contemplated and does not address why the specific proposed modification would have been obvious. The fact that the Office only had a specific modification in mind does not narrow the overly broad proposed motivation. There is nothing in Kato that would suggest grouping the register index designation signal with the selected motion vector. Therefore, *prima facie* obviousness has not been established. Claims 13 and 20 provide language similar to claim 1.

Claim 1 further provides that the two blocks use a macroblock adaptive field/frame coding. In contrast, Kato appears to be silent regarding macroblock adaptive field/frame coding as presently claimed. Claim 13 provides language similar to claim 1. As such, claims 1, 13 and 20 are fully patentable over the cited reference and the rejection should be withdrawn.

Claim 6 provides that the particular value defines how many of the motion vectors are used by at least one of the two blocks. In contrast, the Office Action does not address the language of claim 6. Therefore, *prima facie* obvious has not been established. As such, the Office is respectfully requested to either (i) provide a new Office Action addressing the language of claim 6 or (ii) withdrawn the rejection.

Claim 8 provides a step for using a list 0 prediction of the prediction types for the motion vectors, where each of the motion vectors is used for a different one of the two blocks. Despite the assertion in the Office Action, the macroblock MB0 in FIG. 7 of Kato does not imply a list 0 prediction type. One of ordinary skill in the art familiar with the H.264 recommendation would appear to understand that a "list 0 prediction" is different than a macroblock designated as "MB0". A copy of the common definition of a "list 0 prediction" is provided in Appendix A (the H.264 recommendation version E) in paragraph 3.73. A common definition of a "reference picture list" is provided in Appendix A in paragraph 3.122. Furthermore, both motion vectors for MB0 in Kato appear to be for the same block. Therefore, Kato does not appear to teach or suggest a step for using a list 0 prediction of the prediction types for the motion vectors, wherein each of the motion vectors is used for a different one of the two blocks as presently claimed. Claim 9 provides language similar to claim 8

for using a list 1 prediction. As such, claims 8 and 9 are fully patentable over the cited reference and the rejection should be withdrawn.

Claim 5 provides that the group includes at most two of the motion vectors. Despite the assertion in the Office Action, column 20, lines 1-35 of Kato appear to be silent regarding grouping of multiple motion vectors and limiting the number of motion vectors in a group. Therefore, Kato does not appear to teach or suggest that the group includes at most two of the motion vectors as presently claimed. Claim 15 provides language similar to claim 5. As such, claims 5 and 15 is fully patentable over the cited reference and the rejection should be withdrawn.

Claims 2-12, 14-19, 22 and 25 depend from claims 1, 13 and 21, which are now believed to be allowable. As such, the above dependent claims are fully patentable over the cited reference and the rejection should be withdrawn.

COMPLETENESS/FINALITY OF THE OFFICE ACTION

Aside from a notice of allowance, Applicant's representative respectfully requests any further action on the merits be presented as a non-final action. No sustainable arguments were presented for claim 6 as required by 37 CFR §1.104(b) and MPEP §706.07. The arguments for claim 24 failed to account for all of the claim limitations as required by 37 CFR

§1.104(b). Furthermore, the arguments for claims 1, 13 and 21 have not been clearly developed per MPEP §706.07 or clearly explained per 37 C.F.R. §1.104(c)(2). As such, the current Office Action is incomplete and the finality should be withdrawn.

Accordingly, the present application is in condition for allowance.. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicant's representative at 586-498-0670 should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge Deposit Account No. 12-2252.

Respectfully submitted,

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Appendix A

Draft revised ITU-T Recommendation H.264

Advanced video coding for generic audiovisual services

Editor's Note:

This document contains (in integrated form)

- Errata report corrections relative to the May 2003 standard (ITU-T Rec. H.264 | ISO/IEC 14496-10) up to and including the disposition of comments to the March 2004 meeting in Munich (starting with JVT-K051r1).
- Fidelity range extensions amendment as of the July 2004 meeting in Redmond in Draft Amendment 1, which was not separately submitted for approval in ITU-T (the non-integrated version is JVT-L047d12 and the integrated version is JVT-L050d5).
- Additional error report corrections reflecting the outcome of the October 2004 meeting in Palma de Mallorca, Spain (with the non-integrated version being JVT-M049d6).
- Additional error report edits reflecting the outcome of the January 2005 meeting in Hong Kong (subclause 7.4.2.11 semantics of rbsp_stop_one_bit and rbsp_alignment_zero_bit changing "is a single bit equal to" to "shall be equal to", and subclauses 7.3.5.1 and 7.4.5.1 syntax and semantics of intra_chroma_pred_mode changing u(v) to ue(v) and specifying its range of values).

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Title page to be provided by ITU-T | ISO/IEC

DRAFT INTERNATIONAL STANDARD
Draft Revised ISO/IEC 14496-10 (E)
Draft Revised Rec. H.264 (E)
DRAFT ITU-T RECOMMENDATION

TABLE OF CONTENTS

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3.58 **hypothetical stream scheduler (HSS)**: A hypothetical delivery mechanism for the timing and data flow of the input of a *bitstream* into the *hypothetical reference decoder*. The HSS is used for checking the conformance of a *bitstream* or a *decoder*.

3.59 **I slice**: A *slice* that is not an *SI slice* that is decoded using *prediction* only from decoded samples within the same *slice*.

3.60 **informative**: A term used to refer to content provided in this Recommendation | International Standard that is not an integral part of this Recommendation | International Standard. Informative content does not establish any mandatory requirements for conformance to this Recommendation | International Standard.

3.61 **instantaneous decoding refresh (IDR) access unit**: An *access unit* in which the *primary coded picture* is an *IDR picture*.

3.62 **instantaneous decoding refresh (IDR) picture**: A *coded picture* in which all *slices* are *I* or *SI slices* that causes the *decoding process* to mark all *reference pictures* as "unused for reference" immediately after decoding the IDR picture. After the decoding of an IDR picture all following *coded pictures* in *decoding order* can be decoded without *inter prediction* from any *picture* decoded prior to the IDR picture. The first *picture* of each *coded video sequence* is an IDR picture.

3.63 **inter coding**: Coding of a *block*, *macroblock*, *slice*, or *picture* that uses *inter prediction*.

3.64 **inter prediction**: A *prediction* derived from decoded samples of *reference pictures* other than the current *decoded picture*.

3.65 **interpretation sample value**: A possibly-altered value corresponding to a decoded sample value of an *auxiliary coded picture* that may be generated for use in the *display process*. Interpretation sample values are not used in the *decoding process* and have no normative effect on the *decoding process*.

3.66 **intra coding**: Coding of a *block*, *macroblock*, *slice*, or *picture* that uses *intra prediction*.

3.67 **intra prediction**: A *prediction* derived from the decoded samples of the same decoded *slice*.

3.68 **intra slice**: See *I slice*.

3.69 **inverse transform**: A part of the *decoding process* by which a set of *transform coefficients* are converted into spatial-domain values, or by which a set of *transform coefficients* are converted into *DC transform coefficients*.

3.70 **layer**: One of a set of syntactical structures in a non-branching hierarchical relationship. Higher layers contain lower layers. The coding layers are the *coded video sequence*, *picture*, *slice*, and *macroblock* layers.

3.71 **level**: A defined set of constraints on the values that may be taken by the *syntax elements* and variables of this Recommendation | International Standard. The same set of levels is defined for all *profiles*, with most aspects of the definition of each level being in common across different *profiles*. Individual implementations may, within specified constraints, support a different level for each supported *profile*. In a different context, level is the value of a *transform coefficient* prior to *scaling*.

3.72 **list 0 (list 1) motion vector**: A *motion vector* associated with a *reference index* pointing into *reference picture list 0* (*list 1*).

3.73 **list 0 (list 1) prediction**: *Inter prediction* of the content of a *slice* using a *reference index* pointing into *reference picture list 0* (*list 1*).

3.74 **luma**: An adjective specifying that a sample array or single sample is representing the monochrome signal related to the primary colours. The symbol or subscript used for luma is Y or L.

NOTE – The term luma is used rather than the term luminance in order to avoid the implication of the use of linear light transfer characteristics that is often associated with the term luminance. The symbol L is sometimes used instead of the symbol Y to avoid confusion with the symbol y as used for vertical location.

3.75 **macroblock**: A 16x16 *block* of *luma* samples and two corresponding *blocks* of *chroma* samples. The division of a *slice* or a *macroblock pair* into macroblocks is a *partitioning*.

3.76 **macroblock-adaptive frame/field decoding**: A *decoding process* for *coded frames* in which some *macroblocks* may be decoded as *frame macroblocks* and others may be decoded as *field macroblocks*.

3.77 **macroblock address**: When *macroblock-adaptive frame/field decoding* is not in use, a macroblock address is the index of a macroblock in a *macroblock raster scan* of the *picture* starting with zero for the top-left *macroblock* in a *picture*. When *macroblock-adaptive frame/field decoding* is in use, the macroblock address of the *top macroblock* of a *macroblock pair* is two times the index of the *macroblock pair* in a *macroblock pair raster scan* of the *picture*, and the macroblock address of the *bottom macroblock* of a *macroblock pair* is the macroblock address of the corresponding *top macroblock* plus 1. The macroblock address of the *top*

3.102 **picture**: A collective term for a *field* or a *frame*.

3.103 **picture parameter set**: A *syntax structure* containing *syntax elements* that apply to zero or more entire *coded pictures* as determined by the pic_parameter_set_id *syntax element* found in each *slice header*.

3.104 **picture order count**: A variable having a value that is non-decreasing with increasing *picture* position in output order relative to the previous *IDR picture* in *decoding order* or relative to the previous *picture* containing the *memory management control operation* that marks all *reference pictures* as "unused for reference".

3.105 **prediction**: An embodiment of the *prediction process*.

3.106 **prediction process**: The use of a *predictor* to provide an estimate of the sample value or data element currently being decoded.

3.107 **predictive slice**: See *P slice*.

3.108 **predictor**: A combination of specified values or previously decoded sample values or data elements used in the *decoding process* of subsequent sample values or data elements.

3.109 **primary coded picture**: The coded representation of a *picture* to be used by the *decoding process* for a bitstream conforming to this Recommendation | International Standard. The primary coded picture contains all *macroblocks* of the *picture*. The only *pictures* that have a normative effect on the *decoding process* are primary coded pictures. See also *redundant coded picture*.

3.110 **profile**: A specified subset of the syntax of this Recommendation | International Standard.

3.111 **quantisation parameter**: A variable used by the *decoding process* for *scaling* of *transform coefficient levels*.

3.112 **random access**: The act of starting the decoding process for a *bitstream* at a point other than the beginning of the stream.

3.113 **raster scan**: A mapping of a rectangular two-dimensional pattern to a one-dimensional pattern such that the first entries in the one-dimensional pattern are from the first top row of the two-dimensional pattern scanned from left to right, followed similarly by the second, third, etc. rows of the pattern (going down) each scanned from left to right.

3.114 **raw byte sequence payload (RBSP):** A syntax structure containing an integer number of *bytes* that is encapsulated in a *NAL unit*. An RBSP is either empty or has the form of a *string of data bits* containing *syntax elements* followed by an *RBSP stop bit* and followed by zero or more subsequent bits equal to 0.

3.115 **raw byte sequence payload (RBSP) stop bit:** A bit equal to 1 present within a *raw byte sequence payload (RBSP)* after a *string of data bits*. The location of the end of the *string of data bits* within an *RBSP* can be identified by searching from the end of the *RBSP* for the *RBSP stop bit*, which is the last non-zero bit in the *RBSP*.

3.116 **recovery point**: A point in the *bitstream* at which the recovery of an exact or an approximate representation of the *decoded pictures* represented by the *bitstream* is achieved after a *random access* or *broken link*.

3.117 **redundant coded picture**: A coded representation of a *picture* or a part of a *picture*. The content of a redundant coded picture shall not be used by the *decoding process* for a *bitstream* conforming to this Recommendation | International Standard. A *redundant coded picture* is not required to contain all *macroblocks* in the *primary coded picture*. Redundant coded pictures have no normative effect on the *decoding process*. See also *primary coded picture*.

3.118 **reference field**: A *reference field* may be used for *inter prediction* when *P*, *SP*, and *B slices* of a *coded field* or *field macroblocks* of a *coded frame* are decoded. See also *reference picture*.

3.119 **reference frame**: A *reference frame* may be used for *inter prediction* when *P*, *SP*, and *B slices* of a *coded frame* are decoded. See also *reference picture*.

3.120 **reference index**: An index into a *reference picture list*.

3.121 **reference picture**: A *picture* with nal_ref_idc not equal to 0. A *reference picture* contains samples that may be used for *inter prediction* in the *decoding process* of subsequent *pictures* in *decoding order*.

3.122 **reference picture list**: A list of *reference pictures* that is used for *inter prediction* of a *P*, *B*, or *SP slice*. For the *decoding process* of a *P* or *SP slice*, there is one reference picture list. For the *decoding process* of a *B slice*, there are two reference picture lists.